Smallpox Bibliography
September 2003

1: AIDS Clin Care. 2003 Jul;15(7):61-3.

Smallpox vaccination and the HIV-infected patient: a roundtable.

Bartlett J, del Rio C, DeMaria A Jr, Sepkowitz KA.

Publication Types:
Newspaper Article

PMID: 12913953 [PubMed - indexed for MEDLINE]

2: Am Fam Physician. 2003 Aug 1;68(3):554, 557-8.

ACIP issues guidelines on the use of smallpox vaccine in a pre-event vaccination program.

Schroeder BM; Advisory Committee on Immunization Practices; National Vaccine Advisory Committee; Healthcare Infection Control Practices Advisory Committee.

Publication Types:
Guideline
Practice Guideline

PMID: 12924838 [PubMed - indexed for MEDLINE]

3: Am J Epidemiol. 2003 Jul 15;158(2):110-7.

Transmission potential of smallpox: estimates based on detailed data from an outbreak.

Eichner M, Dietz K.

Department of Medical Biometry, University of Tubingen, Tubingen, Germany. martin.eichner@uni-tuebingen.de

Recent discussions on the use of variola virus by bioterrorists have rekindled

interest in the parameters that govern the transmissibility of smallpox. Here, the authors estimate by maximum likelihood the parameters of the spread of smallpox from historical data on an epidemic in 1967 in the town of Abakaliki, Nigeria, afflicting a religious group that refused vaccination. According to the authors' estimates, 79.9% (95% confidence interval (CI): 63.6, 87.9) of the infectious contacts occurred within the compounds of the cases and 93.3% (95% CI: 80.6, 98.8) among compound members and other close contacts. Each case had 0.164 (95% CI: 0, 1.31) sufficiently close contacts on average during the fever period that preceded the rash and 6.87 (95% CI: 4.52, 10.1) sufficiently close contacts during the whole course of infectivity. These results support the widely held belief that smallpox spreads slowly, mainly among close contacts, and that infectivity before the onset of rash was negligible.

PMID: 12851223 [PubMed - indexed for MEDLINE]

4: Am J Epidemiol. 2003 Jul 15;158(2):118-28.

Case isolation and contact tracing can prevent the spread of smallpox.

Eichner M.

Department of Medical Biometry, University of Tubingen, Tubingen, Germany. martin.eichner@uni-tuebingen.de

Fears that terrorist groups may have gained access to variola virus have led to widespread discussions on how to prevent the reintroduction of smallpox by vaccination and on the availability of sufficiently large amounts of vaccine. In this paper, the author examines how the spread of smallpox is affected by isolating overt cases and taking their contacts under close surveillance for up to 3 weeks. The author assumes that case detection gradually improves from initially 7 days to 3 days. This intervention should be accompanied by vaccination, but its outcome does not depend on the vaccine's efficacy. It may, therefore, be especially important in controlling outbreaks caused by pathogens whose immunologic properties have been modified by genetic engineering. Using stochastic computer simulations, the author demonstrates that contact tracing and case isolation can extinguish smallpox outbreaks in highly susceptible populations within less than half a year without causing totals of more than 550 secondary cases per 100 index cases. The author also derives simple approximate expressions that allow prognostication on how efficiently an outbreak can be controlled by the described measures alone and prediction of the expected number of cases in an outbreak and the number of people that must be taken under surveillance.

PMID: 12851224 [PubMed - indexed for MEDLINE]

5: Am J Ophthalmol. 2003 Aug;136(2):343-52.

Ocular complications of smallpox vaccination.

Pepose JS, Margolis TP, LaRussa P, Pavan-Langston D.

Pepose Vision Institute, Chesterfield, Missouri 63017, USA.

PURPOSE: To describe the ocular complications of smallpox vaccination and to discuss potential therapeutic options. DESIGN: Review of pertinent medical literature and recent treatment recommendations of the Centers for Disease Control and Prevention. RESULTS: After immunization against smallpox, vaccinia infection of the eyelid, conjunctiva, or ocular surface can result from accidental autoinoculation from a vaccination site before scab formation or from contact with a recently vaccinated individual. While uncommon, corneal involvement can lead to stromal opacification and scarring. Clinical findings of ocular and periocular vaccinia must be differentiated from those produced by other pathogens such as molluscum contagiosum, herpes simplex, varicella zoster, and acanthamoeba infections. Clinical diagnosis can be confirmed by electron microscopy to identify the presence of orthopoxvirus, as well as by virologic culture, polymerase chain reaction, and/or restriction endonuclease analysis of viral isolates. CONCLUSIONS: While the majority of ocular complications of smallpox vaccination in immunocompetent patients are self-limiting, selective cases may require treatment with trifluridine drops, topical corticosteroids and vaccinia immune globulin (VIG). Vaccinia virus does not appear to be sensitive to acyclovir. Specific treatment recommendations are outlined for the spectrum of ocular manifestations.

Publication Types:
Historical Article
Review
Review, Tutorial

PMID: 12888060 [PubMed - indexed for MEDLINE]

6: BMJ. 2003 Aug 23;327(7412):414.

US panel advises caution over smallpox vaccination.

Charatan F.

Publication Types:
News

PMID: 12933721 [PubMed - indexed for MEDLINE]

7: Clin Infect Dis. 2003 Aug 1;37(3):426-32. Epub 2003 Jul 22.

Separate worlds set to collide: smallpox, vaccinia virus vaccination, and human immunodeficiency virus and acquired immunodeficiency syndrome.

Amorosa VK, Isaacs SN.

Division of Infectious Diseases, Department of Medicine, University of Pennsylvania and the Philadelphia Veterans Affairs Medical Center, Philadelphia, Pennsylvania 19104-6073, USA.

Concerns about the possible release of smallpox by bioterrorists has led to policies that recommend smallpox vaccination of some health care providers, and, in the near future, the vaccine may become available to the general population on a voluntary basis. Both smallpox virus (variola virus) and the smallpox vaccine (vaccinia virus) will have a significant impact on people infected with human immunodeficiency virus (HIV). Given that populations with acquired immunodeficiency syndrome and populations with immunosuppressed conditions due to solid organ and bone marrow transplantation were not present in the days when smallpox was prevalent, we will speculate on how smallpox might present in immunodeficient patients, and we will review the adverse events expected from the smallpox vaccine in hosts with HIV infection.

PMID: 12884168 [PubMed - indexed for MEDLINE]

8: Clin Infect Dis. 2003 Aug 1;37(3):467.

Comment on:
Clin Infect Dis. 2003 Mar 1;36(5):622-9.

Smallpox vaccination after a bioterrorism-based exposure.

Bicknell WJ, James K.

Publication Types:
Comment
Letter

PMID: 12884184 [PubMed - indexed for MEDLINE]

9: Hastings Cent Rep. 2003 Mar-Apr;33(2):6-7.

Smallpox vaccine: not worth the risk.

Annas GJ.

Publication Types:
News

PMID: 12760109 [PubMed - indexed for MEDLINE]

10: J Midwifery Womens Health. 2003 Jul-Aug;48(4):258-67, 302-4.

Smallpox: a disease of the past? Consideration for midwives.

Constantin CM, Martinelli AM, Foster SO, Bonney EA, Strickland OL.

Emory University, Atlanta, GA 30322-4207, USA.

Smallpox infection was often more severe in pregnant women than in non-pregnant

women or in men, regardless of vaccination status. Women with smallpox infection during pregnancy have higher rates of abortions, stillbirths, and preterm deliveries than women without the disease. Pregnant women have high incidences of hemorrhagic-type and flat-type smallpox, which are associated with extremely high fatality rates. Although smallpox was eradicated in the late 1970s, current international concern exists regarding the potential use of smallpox virus as an agent for bioterrorism. This manuscript reviews clinical aspects of smallpox, smallpox immunization, and outcomes in pregnant women.

Publication Types:
Review
Review, Tutorial

PMID: 12867910 [PubMed - indexed for MEDLINE]

11: MMWR Morb Mortal Wkly Rep. 2003 Aug 29;52(34):819-20.

Update: adverse events following civilian smallpox vaccination--United States, 2003.

Centers for Disease Control and Prevention (CDC).

During January 24-August 8, 2003, smallpox vaccine was administered to 38,257 civilian health-care and public health workers in 55 jurisdictions to prepare the United States for a possible terrorist attack using smallpox virus. This report updates information on vaccine-associated adverse events among civilians vaccinated since the beginning of the program and among contacts of vaccinees, received by CDC from the Vaccine Adverse Event Reporting System (VAERS) as of August 8.

PMID: 12944880 [PubMed - indexed for MEDLINE]

12: Science. 2003 Aug 15;301(5635):912-3.

Thomas Monath profile. Riding the biodefense wave.

Enserink M.

Publication Types:
Biography
Historical Article
News

Personal Name as Subject:
Monath T

PMID: 12920279 [PubMed - indexed for MEDLINE]

13: Trans R Soc Trop Med Hyg. 2003 Jan-Feb;97(1):97-9.

Virulence of variola viruses for suckling mice.

Huq F, Dumbell KR.

St Mary's Hospital Medical School, London, UK.

We report work done in 1971 to determine the quantitative virulence for suckling mice of 26 variola virus isolates from different countries and from cases of differing severity. Strains of recognized variola major and variola minor viruses differed up to 100-fold (expressed as the harmonic mean dose of inoculum which killed mice 2-4 d old, inoculated intracranially, in 5 d). Isolates from Indonesia and from East and West Africa gave intermediate values. Unlike tests on chick embryos, this test distinguished between African and Indonesian isolates.

PMID: 12886813 [PubMed - indexed for MEDLINE]